A COMPARATIVE STUDY OF PHYSICAL FITNESS VARIABLES AMONG GOA RUGBY PLAYERS AT PLAYING POSITIONS AND POSITIONAL GROUPS

A Research Proposal submitted to

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INTRODUCTION

Do your best to achieve the goal. Do what make you distinct from others. Snatch your rights by excelling in your pursuits. Do maximum for distinction in your field by Saina Nehwal. Physical training involves exposing the individual to a training load or work stress of sufficient intensity, duration and frequency to produce a visible or measurable training effect, that is, to improve the functions for which one is training. To achieve such a training effect, it is necessary to expose the individual to an overload that is larger than the one regularly encountered during everyday training.

The human body is an amazing machine. All human movements, from the blinking of an eye to the running of a marathon, depends on the proper functioning of skeletal muscles. Whether it is the strained effort of a sumo wrestler or the graceful spin of a ballet dancer, physical activity can be accomplished only through muscle force.

Sports performance is considered as a significant issue all around the world during recent years. Training is not recent discovery. In ancient times, people systematically trained for military and Olympic endeavours. Today athletes prepare themselves for any goal through training. Most of the coaches are searching for the most effective method of training. Better performance can only be achieved through scientific, systematic and planned sports training (Daniel. J., Hopkins. W. G., Nicholas. D) Rugby is not a popular sport in many countries of the world. As Rugby has developed at the elite level several research regarding match performance, injury prevention and training has been Recorded.

Rugby is a collision sport that involves high-intensity bouts of exercise including sprint and agility activities and contact and tackling separated by short bouts of low-intensity activity (Baker D.). Rugby players need speed, agility, muscular strength and power to

meet the demands on the sport and these factors distinguish high- and low-level players. Indeed, muscular strength and power are directly associated with performance, whereby the elite players demonstrate the highest muscle power values. Moreover, due to the tactical and movement patterns of rugby, players should have agility skills for avoiding contact and collisions. In the case of rugby, there are two general player positions, backs and forwards, with different physical demands. Forwards are involved in more collisions, whereas backs are involved in more high-speed running. In addition, previous studies identified that forwards are stronger and more powerful than backs and Backs are reportedly faster and more agile than forwards (Jones B., Emmonds S., Hind K., Nicholson G., Rutherford Z., & Till K.).

Rugby union players have a diverse range of physical attributes, and a distinct physique will naturally orient a player toward a particular position over others (K. L. Quarrie, P. Handcock, M. J. Toomey and A. E. Waller). The scrum is a critical part of rugby union, resulting in a set contest between opposition forward packs, with dominance in this area, a critical factor related to ball possession. The scrum organization is a 3-1 pattern, involving 2 players at the side, the hooker bound between a tight head and loosehead prop, the front row position demands strength and power in the scrums.

Rugby league is a collision team sport played at junior and senior levels worldwide, whereby players require highly developed anthropometric and physical qualities. All Rugby players will require a reasonable level of the 5 fitness components. The higher the level of play the greater the level of fitness required to meet the demands of the game. In addition, it needs to be recognised that there are different fitness demands on the player depending on the position in which he plays. Special fitness training is concerned with providing training methods that link General preparation with more game related activities. Rugby players need muscular strength and power to meet the demands of the sport; therefore, a proper assessment of the performance in rugby players should include both variables HRPF and SRPF (Diego, Moisés and Iván) A number of studies have described the physical traits of the Rugby 15-a-side player, information on the physical profile of the seven’s player is less available. Therefore, the purpose of this study will be to examine the physical fitness of Goa Rugby players at playing positions and positional groups.

SIGNIFICANCES OF THE STUDY

- The findings of the study will aid to the coaches that the players can be trained together or by positional playing groups.
- This study will also help the players to know their current fitness level.
- This study will be helpful to improve the selected physical variables of the rugby players.

STATEMENT OF THE PROBLEM

Whatever your sport is, Strength is vital. Strength, is the ability to generate force, which means you can easily dominate your opponent. Being strong not just helps in striving the goal but also reduces the risk of injuries. A rugby player needs health as well as skill related physical fitness. Apart from working on strength rest all the physical fitness components are also necessary to work on. Several investigations are conducted so far to record players competence based on their physical, physiological and psychological variables in different places. Rugby training is common to all the players irrespective of their playing position or the positional group. But do they need to be trained together or according to the position of play or according to the groups ie. Fronts and backs? Therefore, the researcher felt a need to study if any difference exists or not in Rugby players physical fitness variables according to the playing position or by positional playing groups.

OPERATIONAL DEFINATIONS

- **Physical Fitness**: One's ability to accomplish daily routine work with optimal fatigue and stress. In this study Physical fitness means different components of Physical Fitness, such as:

- **Cardiovascular Endurance** – The ability of lungs, heart, and blood to transfer oxygen during continues physical activity.
- **Muscular Strength** – The amount of force one can put out or the amount of weight one lift.
- **Flexibility** – The ability to perform movement with greater range of motion.
- **Body Composition** – It refers to the percentage of fat, bone, and muscle in your body.
- **Speed** –The ability to execute motor actions, under a given conditions, in minimum possible time
- **Agility** – The ability of the body to change the direction quickly with control over the movement.
- **Power -** The ability to exert a force against a resistance.

- **Rugby 7's Player**: A person who plays Rugby with 7 players in a team is known as Rugby 7's player. In this study national level senior men are the Rugby 7's players.

OBJECTIVES OF THE STUDY

- To measure the physical fitness of Rugby players
- To compare the physical fitness variables among individual playing positions and positional playing group.

HYPOTHESE OF THE STUDY

$H_1 - _1$ There will be a significant difference in the physical fitness variables among individual playing position.

H_1 –3 There will be a significant difference in the physical fitness variables among positional playing groups.

LIMITATION

- There will be no control on the socio-economic status, occupation, qualification of the Rugby players. Hence these will be considered as a limitation of the study.

DELIMITATIONS

- The study will be delimited to Rugby 7's players only.
- This study will be delimited to the senior men's rugby players from Goa only.
- This study will be delimited to those players who are currently playing and has represented the state of Goa in nationals organized by Rugby India.

METHODOLOGY

Method

For the present study, descriptive comparative method will be used to study the physical fitness variables among individual playing positions and positional playing groups.

Sampling

1.1 Population

All the Rugby players from Goa are the population of this study.

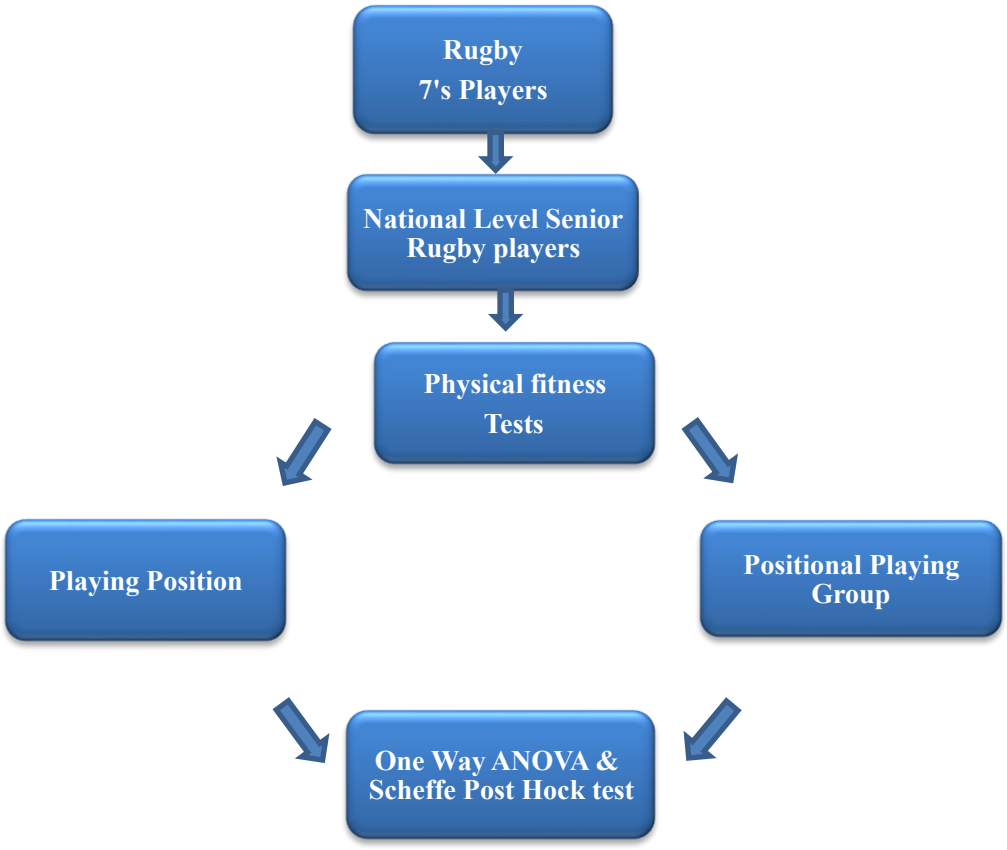
1.2 Sample

For this comparative study, senior Rugby players will be selected by purposive sampling technique who has represented the state for India Rugby Nationals (n=40).

Tools for data collection ✞ Physical Fitness Variables

Variables	Tests	Scoring
Speed	30 m Dash	Seconds
Agility	'T' Test	Seconds
Explosive Power Lower Body Upper Body	Vertical Jump Push Ups	Centimetre Number
Cardiovascular Endurance	Bronco Test	Seconds
Body Composition	Body Mass Index	Kg/m^2
Muscular Strength (Abdomen)	Sit Ups	Number
Flexibility	V Sit and Reach	Inch

PROCEDURE OF THE STUDY



STATISTICAL TECHNIQUE

To examine the comparison between players playing positions and Positional playing groups, One way ANOVA analysis of variance and Scheffe Post Hock Test will be used.

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Signature of Student **Signature of Guide**

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